

REMARKS

Reconsideration and withdrawal of the rejections set forth in the Office Action dated September 15, 2004 are respectfully requested. The applicant petitions the Commissioner for a 2-month extension of time: a separate petition accompanies this amendment.

I. Amendments

Claim 19 has been amended to recite the further limitation that the optical light source and detector are designed to allow detecting the spectral emission characteristics of PREs and other light scattering entities in the field at each of a plurality of different spectral wavelengths. Support for this limitation is found, for example, at page 3, lines 23-25; page 3, line 33 to page 4, line 2; page 5, lines 5-10; page 13, line 33 to page 14, line 20; page 18, lines 19-30; page 20, lines 17-32; page 21, lines 28-34, and original claims 21, 23 and 24.

Claim 19 has been amended to include the limitation that the image processor operates to construct a computer image of the positions and values of the spectral emission characteristic of individual PREs and other light-scattering entities present in the field at each of the plurality of spectral wavelengths. Support for this limitation is found, for example, on page 18, lines 31-35; page 22, lines 2-19; and original claim 23.

Claim 19 has been amended to include the limitation that the discriminator means functions to discriminate PREs with a selected spectral signature from other light-scattering entities in the computer image, by comparing a selected spectral characteristic of PREs and other light-scattering entities in the field determined over the different spectral wavelengths. Support for this limitation is found, for example, on page 4, lines 32-35; page 14, line 14 to page 15, line 20; page 15, lines 11-15; page 22, line 20-31; and original claim 28.

Claims 21 and 23 were amended to refer to the "plurality of different spectral wavelengths" introduced into claim 19.

Claim 27 stands cancelled.

No new matter has been added by these amendments.

II. Rejections under 35 U.S.C. §102

Claims 19-29 are rejected under 35 U.S.C. 102(e) as allegedly anticipated by King *et al.* (U.S. Patent No. 5,633,724).

Summaries of the present invention and of the cited King *et al.* document are provided in Applicant's response submitted May 17, 2004.

A. Analysis

The standard for lack of novelty, that is, for anticipation, is one of strict identity. To anticipate a claim for a patent, a single prior source must contain all its essential elements. M.P.E.P. § 2131.

Amended claim 19 recites an apparatus having, *inter alia*, the following elements:

- (1) an optical light source and an optical detector designed to allow detecting the spectral emission characteristics of PREs and other light scattering entities in an illumination field at each of a plurality of different spectral wavelengths, (elements (i) and (ii) of amended claim 19), and
- (2) a discriminator for discriminating objects in the illumination field based on a comparison of a selected spectral characteristic of the objects determined over the different spectral wavelengths (element (iii) of amended claim 19).

The apparatus described by King *et al.* does not show or suggest an element for discriminating particles based on a comparison of their spectral characteristics. The apparatus in King *et al.* merely includes a computer (element 122, Col. 5, lines 57-60) "connected to the detection system for electronically collecting and analyzing the data generated by the detection system."

The Examiner asserts that the computer in King *et al.* is "capable of discriminating PREs with a selected spectral signature from other light-scattering entities in the field" (Office action, page 5, second paragraph). The Examiner notes that a recitation of an intended use must result in a structural difference in order to

patentably distinguish the claimed invention from the prior art, citing to *In re Casey* (152 USPQ 234 (CCPA 1967)) and *In re Otto* (136 USPQ 458 (CCPA 1963)). Thus, the Examiner is of the mind that the claimed "discriminating means" is not structurally different than the computer of King *et al.*, since the claim language of "for discriminating PREs with a selected spectral signature from other light-scattering entities in the computer image" relates to an intended use of the discriminating means and does not impart a structural difference.

The "discriminating means" recited in claim 19 relates to a definite element, i.e., a computer having a particular functionality implemented in its hardware or software. Thus, the discriminating means is a combination of interrelated elements, a computer and its software, configured to discriminate PREs with a selected spectral signature from other light-scattering entities in the computer image.

The courts have repeatedly held that a general purpose computer programmed to carry out a claimed invention creates a new machine (*In re Alappat*, 31 USPQ2d 1545 (Fed. Cir. 1994), citing to *In re Prater*, 162 USPQ 541 (CCPA 1969), *In re Freeman*, 197 USPQ 464 (CCPA 1978); and *In re Noll*, 191 USPQ 721 (CCPA 1976)). Specifically, a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software. For example, in the *Prater* case, applicant Prater set forth claims to a system comprising a "means for generating a scalar function...."; "means for generating successive scalar functions...." and "means for determining that one of said scalar functions of greatest magnitude for identification....". During examination and appeal, the U.S. PTO had rejected applicant Prater's apparatus claims as unpatentable under 35 U.S.C. §§ 101, 102 and 103. Regarding the novelty and obviousness rejections the Examiner had said that the system claim read on a "properly programmed general-purpose computer", and that it would be obvious to program a general-purpose computer, which is old under 35 U.S.C. § 102. On appeal, the Board concurred, finding that the "means" elements of the claims were anticipated by commonplace means such as pencil, paper, and ruler (*In re Prater, supra* at 546).

The appeal court, however, reversed the rejection of *Prater's* apparatus claims for lack of anticipation and non-obviousness. First, the court found that the means-plus-function language was expressly permitted by statute and, second, was not anticipated by prior art methods of "paper, pencil, and ruler" since these require human manipulation. Moreover, the patent office's assertion that it would be obvious to program a general-purpose computer to practice the claimed "means" was fatally defective in that it assumes the existence as prior art of applicant Prater's discovery set forth in the "means for" elements. The claim was not anticipated or obvious because the prior art did not teach, nor did a skilled reader of the prior art have knowledge of, Prater's discovery. Without this knowledge, one would not know what to program the computer to do (*In re Prater, supra* at 551).

Similarly, instant claim 19 recites a means for discriminating plasmon resonant entities (PREs) with a selected spectral signature from other light-scattering entities in the computer image, based on a comparison of a selected spectral characteristic of PREs and other light-scattering entities in the field determined over different spectral wavelengths. Applicant has discovered that discrimination of PREs from other light-emitting particles in a target field provides useful information about the field. The cited King *et al.* reference nowhere shows or suggests a means to discriminate PREs from other light-scattering entities based on a comparison of the spectral signature of PREs with the other light-scattering entities. Since King *et al.* nowhere teach this claim feature, it cannot be asserted that the computer in King *et al.* would be "capable of performing this intended use".

Accordingly, since the standard of strict identity for anticipation has not been met, withdrawal of the rejection under 35 U.S.C. §102(e) is respectfully requested.

III. Conclusion

In view of the foregoing, the applicant submits that the claims pending in the application patentably define over the prior art. A Notice of Allowance is therefore respectfully requested.

If in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is encouraged to call the undersigned at (650) 838-4402.

Respectfully submitted,

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